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12th IFAC Symposium
on Information Control Problems
in Manufacturing

Information control:
a complex challenge
for the 21st century

17 / 18 / 19 MAY

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MINISTÈRE DE L'ÉCONOMIE
DES FINANCES ET DE L'INDUSTRIE

Information control: a complex challenge for the 21st century

conference scope

The purpose of the IFAC Symposium on INFORMATION CONTROL PROBLEMS IN MANUFACTURING (INCOM'06) is to offer a forum to present the progress in international research and development work in this field. Special emphasis will be given on the applications of optimization methods as well as automation, information and communication technologies in the **control of the manufacturing plant and the entire supply chain within the e-enterprise**. The symposium will stress the scientific challenges and issues raised by the Intelligent Manufacturing System and Supply Chain paradigms for *optimization* and *agile digital control* of the production systems. The whole product and processes life cycle will be covered, from the design, through the manufacturing and maintenance, to the distribution and service.

scientific topics

- *e-Solutions to Plan and to Design Manufacturing Systems*
- *Facilities Planning and Materials Handling*
- *Inventory Control, Production Planning and Scheduling*
- *Monitoring, Diagnosis and Maintenance of Manufacturing Systems*
- *Web-enabled Manufacturing Control and Wireless Automation*
- *Process Modeling and Information Systems within the Extended Enterprise*
- *Socio-technical and Cognitive Aspects of Automation*
- *Intelligent Manufacturing Systems Modeling and Applications*
- *Distributed Systems and Multi-agents Technologies*
- *Discrete Event Systems Simulation in Manufacturing*
- *Operational Research Applications in CAD/CAM/CAE*

industrial exhibition

Industrial enterprises will play an important role in the symposium. Technical workshops, roundtables discussions, and even publications devoted to industrial contributions will be offered. In addition, an innovative industrial exhibition is planned. It will focus on the cutting edge of information technology and optimization techniques for manufacturing control and industrial management.

This symposium opens a door on a wonderful opportunity to benchmark the latest innovations on Business Process Management, Operation Research Applications, Supply Chain Management Solutions, Intelligent Manufacturing Systems, Information Systems, Technologies for e-Business and e-Manufacturing, Integration Technologies...

**conference
chairs**

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R. GERMINET FR

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General Scientific Chair

A. DOLGUI FR

 Director of the Division for Industrial Engineering
and Computer Sciences

**international
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12th



Ecole Nationale
Supérieure des Mines
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12th IFAC Symposium on Information Control Problems in Manufacturing

main sponsor

IFAC International Federation on Automatic Control
TC 5.1 on Manufacturing Plant Control

IFAC co- sponsorships

IFAC TC 1.3 on Discrete Event and Hybrid Systems
IFAC TC 2.4 on Optimal Control
IFAC TC 4.1 on Components and Instruments
IFAC TC 4.2 on Mechatronic Systems
IFAC TC 4.4 on Cost Oriented Automation
IFAC TC 5.2 on Manufacturing Modelling for Management and Control
IFAC TC 5.3 on Enterprise Integration and Networking
IFAC TC 5.4 on Large Scale Complex Systems
IFAC TC 9.2 on Social Impact of Automation

other sponsorships

IFIP WG 5.3 Computer Aided Manufacturing
IFIP WG 5.7 Integration in Production Management
IFIP WG 7.4 Discrete Optimization
SEE Société de l'Electricité, de l'Electronique, et des Technologies
de l'Information et de la Communication
CNRS GDR MACS Sciences et Techniques de la Production de Biens et de Services

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CALL FOR PAPERS

submission of papers

Deadline for paper submission > **October 1st, 2005**
Submission to special sessions > **November 15, 2005**
Notification of paper acceptance/rejection > **January 6, 2006**
Deadline for final version > **March 1, 2006**

Regular papers (6 pages in IFAC double column format) as well as plenary and survey papers (12 pages in IFAC double column format) will be reviewed by at least two referees. As to regular papers, both academic and industrial oriented communications will be considered. Industrial and scientific contributions will be compiled into several volumes of INCOM06's proceedings. Further submission instructions are available on the website.

preprints and proceedings

Preprints Volumes with all accepted papers will be published before symposium and will be provided for INCOM'06 participants. The final proceedings will be produced after the meeting and will only gather the papers presented at the symposium. The Proceedings are published by Elsevier Ltd as post-conference books with an ISBN and will be kept on sale by the publisher for at least five years.

publication in international journals

The papers included in proceedings will be further examined for possible publication in the IFAC Journals (*Automatica*, *Control Engineering Practice*, *Annual Review in Control*, and *Engineering Applications of Artificial Intelligence*), or in IFAC affiliated journals (e.g. *Real-Time Systems*, *Mechatronics*). The papers not considered for IFAC publications will be examined for publication in some Industrial Engineering, Operations Research and Computer Sciences Journals as *International Journal of Production Economics*, *International Journal of Computer Integrated Manufacturing*, *Journal of Intelligent Manufacturing* and *Journal of Mathematical Modelling and Algorithms*. A complete list of journals associated to the symposium is available on the website.

IFAC Journals, and IFAC affiliated journals have priority access to all contributions presented. If the signing author has not been contacted for further publication within three months of the closing date of the symposium, he and his co-authors are free to submit the paper elsewhere, provided that full acknowledgement is given in any subsequent publication to the original IFAC Proceedings and to the INCOM'06 symposium.

national organizing committee

Organizing Committee Chair **X. BOUCHER** **FR** ENSM.SE
 Industrial Co-Chair **R. RONCHI** **FR** ST Microelectronics

members

Organized at the Ecole Nationale Supérieure des Mines de Saint-Etienne, by the Industrial Engineering and Computer Sciences Division in collaboration with the Microelectronics Division and the Engineering and Health Division.

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fees

_ early registration fee	395.00 €
_ student registration fee	225.00 €
_ late registration fee	450.00 €

The fees include an e-book of preprints (cd-rom), a hardback copy of preprints, symposium program, coffee breaks, lunches and banquet, scientific and industrial exhibitions.

contact

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INCOM 2006 secretariat

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host organization

The Ecole Nationale Supérieure des Mines de Saint-Etienne (ENSM.SE) is ranked perennially among the top ten Graduate Engineering Schools in France. Since 1816, the school has been producing elite scientific managers. Based on close links with leading national and international firms, the School is reputed to be one of the major applied research centers in France. Today, the school provides a general engineer cursus structured around six research centers: the Industrial Engineering and Computer Science, Process Engineering, Environmental Engineering, Materials Science, Microelectronics Engineering, and Engineering and Health Division. Because research is fundamentally linked to the raison d'être of the school, it must be competitive, efficient and highly regarded by the scientific community. Publications, scientific and industrial conferences and recognition of our expertise contribute to the school's reputation.

Under the auspices of the Ministry of Industry, the ENSM.SE is entering the 21st century with a dynamic and innovative approach. Recently founded, both the Microelectronics Division in the new site of Gardanne (2003) and the Engineering and Health Division of Saint-Etienne (2004) demonstrate the school's leadership in the forefront of high technology.



Emerging from the previous division SIMMO, the **Industrial Engineering and Computer Sciences Division (G2I division)** was created on February 2004. The industrial context, characterized by the strong dynamics of change and by novel organizational modes, induces the need for new methods of industrial management. Optimization techniques, communication and information science and technologies are at the heart of this revolution. Directed by Pr. Alexandre Dolgui G2I division of Ecole des Mines de Saint-Etienne is specializing on development of Operational Research, Artificial Intelligence and Management Sciences methods for optimization of production and logistics systems. With a strong industrial technology transfer policy, the research at G2I Division attempts to answer the industrial needs with cooperative and «nimble» solutions which are the keys of the competitiveness. In the field of operational research, G2I division is currently working on new optimization methods for load balancing, new approaches for scheduling and supply planning under lead time uncertainty or novel solutions for the dimensioning of inventory levels and for the selection of equipment. G2I has also developed a high level national expertise on the diagnosis and management of networks of firms and of distributed supply chains. In the field of IT technologies applied to the e-manufacturing process, G2I Division is specialized in multi-agent systems, ambient intelligence and web-based technologies (including semantic web, information retrieval, trust and confidence in numerical documents).

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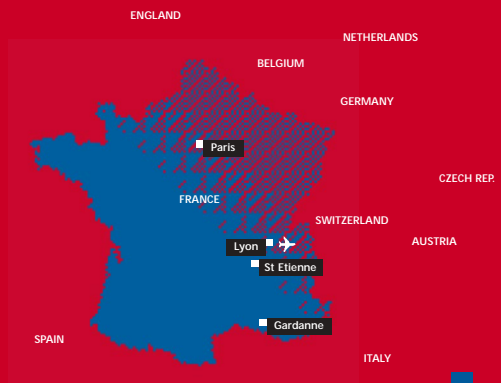
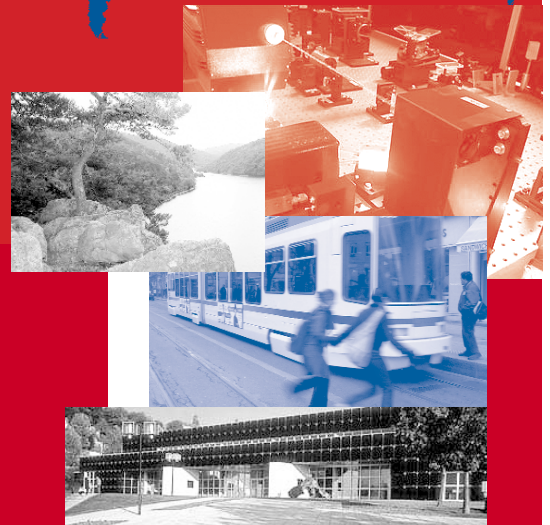
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2006SAINT-ETIENNE
FRANCE

Saint-Etienne, a cultural metropolis at the door of wonderful natural park

The era of coal mining and metal working firmly belongs to Saint-Etienne's past. **The city has clearly evolved towards an economy based on new technologies.** However, the city hasn't forgotten his remarkable industrial history. It is the only city in France selected as historical city for the 19th century. Beyond the Art and Industry National Museum with its unique collection of elaborate weaponry, unusual bicycles and braided ribbons, a complete industrial heritage is there to be visited.

Saint-Etienne does not only have a rich industrial past but an exciting cultural present. Retaining undiminished spirit of daring innovation, the town seems on the verge of becoming the design capital of the world. The design heritage was the impetus behind the creation, in 1998, of the biennial international festival of design, which was an immediate success (150 000 visitors in 2002). With an internationally renowned Modern Art Gallery, Saint-Etienne offers an exceptional cultural center completed with a plethora of cafés, theatres, clubs and restaurants.

Situated at only 60 km from Lyon, Saint-Etienne is at the crossroads of the major French motorways making easily accessible cities like Geneva, Marseilles, Paris and region like the Alps, Drôme and Provence. The region of Saint-Etienne has much to offer. With a town center situated a stone's throw from the Pilat a regional Nature Park, the Forez mountains and the gorges of the River Loire, Saint-Etienne will give you a direct access to wonderful landscape with medieval villages and old stone castles scattered around. In the middle of the regional park, Saint Victor water sport center will give you all the opportunities of sailing, water-skiing or canoeing.



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190 years

the 190th anniversary of the INCOM Host > ENSM.SE

Founded during the restoration, the ENSM.SE was created by Royal decree on the 2nd August 1816. The ENSM.SE quickly built a elite school reputation, in the 19th century. Throughout the 20th century, the School did not cease to develop and grow under the auspices of the Ministry of Industry.

In 2006, the IFAC INCOM'06 Symposium will be dedicated to ENSM.SE's jubilee with specific events during the symposium.